

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

JOSEPH D. STERN,

Plaintiff,

v.

GLOBUS MEDICAL, INC.,

Defendant.

Case No. 1:16-cv-00091-RGA

JURY TRIAL DEMANDED

JOINT CLAIM CONSTRUCTION BRIEF

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Dated: June 23, 2017

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In accordance with the Court's Scheduling Order dated September 9, 2017 (Dkt. 17), the parties hereby presents their Joint Claim Construction Brief.

I. INTRODUCTION.

A. Stern's Introduction

The patents-in-suit relate to cervical plate systems, and more specifically, to cervical plates that are designed to allow subsequent revision surgeries without disturbing the originally-installed (or "primary") cervical plate.

Dr. Stern has been a practicing neurosurgeon since 1995. He has performed numerous surgeries requiring anterior cervical plates. Sometimes, after having an anterior cervical plate implanted, a patient requires a revision surgery, to address issues with additional levels of the spine. Having seen firsthand the impact revision surgery can have on a patient where an existing, implanted plate is typically removed and replaced with a larger plate (covering additional levels of the spine), in late 2004 Dr. Stern conceived of the idea for a Revisable Anterior Cervical Plating System that would reduce trauma to the patient when surgery was necessary.

Dr. Stern invented a plating system where the primary plate is specifically designed to allow it to connect to a revision plate. Important in his invention was designing a primary plate to be able to later receive a revision plate, and for the revision plate to attach to the primary plate, without having to move or remove the primary plate, or even remove the fasteners holding the primary plate in place. Instead of having to remove the already installed primary plate, and replace it with a different plate, Dr. Stern's invention would allow the surgeon to use a primary plate specifically designed to cooperatively engage with a revision plate.

Dr. Stern's invention provides patients with a long-term solution; if a revision surgery is necessary, it can be performed with no disruption of the primary plate, therefore minimizing

trauma to the patient. As the provisional patent application states: “The current invention is directed to an improved anterior cervical plate that allows a new plate to be attached to the prior plate, so that the old plate does not have to be removed.” Provisional Application 60/680,728 (“Provisional”) at 1:25-28 (attached to previously-filed Joint Claim Construction Chart (D.I. 39) as Exhibit C).

Dr. Stern filed a patent application on his invention on May 12, 2005 (the above-referenced provisional patent application). Following his initial filing, he filed an ordinary utility application claiming priority back to the provisional application, and subsequently filed a number of continuation applications. Dr. Stern has numerous granted patents covering his invention. Two of his patents are in this lawsuit: U.S. Pat. Nos. 8,556,895 (“the ‘895 patent”) and 8,858,556 (“the ‘556 patent”). Dr. Stern also has additional patents (e.g., U.S. Pat. Nos. 8,070,749 and 9,095,381) with claims directed to different embodiments not at issue in this litigation. Dr. Stern also has a number of pending continuation applications, which are expected to issue soon, and may become relevant to this litigation.

B. Globus’ Introduction

Occasionally ignored, but more often only cursorily addressed is the fundamental question of “what’s the invention.” Here, the ‘895 Patent specification is clear and unequivocal on the inquiry¹:

Although the figures and following discussion will provide a detailed description of a number of exemplary embodiments of the cervical plate system of the current invention, it should be understood that any number of designs can be used to achieve the basic goal of the system. For example, in their basic form each of the exemplary plating systems include an existing plate and a revision plate

¹ The parties agreed as noted in Plaintiff’s Opening Position (section IV.1.b), p. 7), that citations to the “specification” would be tethered to the ‘895 Patent specification.

each designed to be anchored to a vertebral bone through a vertebral anchoring means, such as, a connecting screw. A characteristic feature of this plate system is that each of the revision plates includes an interlocking portion that provides a linkage between the plates. The linkage can be either flexible or rigid, of any suitable design such that the two plates can be lockingly connected without removal of the existing plate. These linkages in turn can be locked rigidly between the plates (in a so-called fixed system), or can be allowed to travel to a limited degree to allow for settling (in a so-called dynamic system). The choice of whether to use a fixed or dynamic system is left to the surgeon.

D.I. 39, Exhibit A - '895 Patent, Col. 4, line 65-Col. 5, line 16 (emphasis added)

* * *

Regardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws.

Several variants of this basic design are shown in FIGS. 1 to 16, all of which incorporate the basic innovation of having a linkage system that both allows a new plate to be securely fixed to a preexisting plate and has coordinating surfaces between the old and new plates that when combined provide stability to and between the plates independent of the vertebral connecting screws.

D.I. 39, Exhibit A - '895 Patent, Col. 5, lines 38-44 (emphasis added)

In his Introduction, Plaintiff ignores the clear and concise language noted above in favor of the following:

Dr. Stern's invention provides patients with a long-term solution; if a revision surgery is necessary, it can be performed with no disruption of the primary plate, therefore minimizing trauma to the patient. As the provisional patent application states: "The current invention is directed to an improved anterior cervical plate that allows a new plate to be attached to the prior plate, so that the old plate does not have to be removed." Provisional Application 60/680,728 ("Provisional") at 1:25-28 (attached to previously-filed Joint Claim Construction Chart (D.I. 39) as Exhibit C).

Section I.A., pp. 1-2

Plaintiff's citation to Provisional Application No. 60/680,728 is a transparent attempt to walk away from the clear disclosure in the '895 Patent specification, by rewriting the asserted claims to remove the requirement of locking. As noted in the '895 Patent specification, however, regardless of the ultimate design "both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws." D.I. 39, Exhibit A, '895 Patent, Col. 5, lines 30-37 (emphasis added)

II. PATENTS-IN-SUIT

The patents-in-suit are:

- A.** U.S. Pat. No. 8,556,895 ("the '895 patent"), a copy of which is attached to the previously-filed Joint Claim Construction Chart (D.I. 39) as Exhibit A;
- B.** U.S. Pat. No. 8,858,556 ("the '556 patent"), a copy of which is attached to the previously-filed Joint Claim Construction Chart (D.I. 39) as Exhibit B.

III. LAW OF CLAIM CONSTRUCTION

Per the Court's Scheduling Order dated September 9, 2017 (D.I. 17), the parties have omitted a summary of the general law relating to claim construction.

IV. DETERMINING THE MEANING OF THE ASSERTED CLAIMS.

In order to determine the meaning of the asserted claims, one must consider the qualifications of a person of ordinary skill in the art.

A. Qualifications of Person of Ordinary Skill in the Art

1. Stern's Position

In this case, the relevant art is spinal implants, and more specifically, cervical plates. A person of ordinary skill in the art would be a surgeon familiar with cervical plates by way of having performed surgery using such plates, or an engineer with experience designing such plates. Plaintiff contends that the qualifications of a person of ordinary skill in the field of cervical plates is either: 1) a neurosurgeon with at least 4 years' experience in spinal surgery, and particularly, installing cervical plates; or 2) an engineer with a mechanical engineering degree, biomedical engineering degree or equivalent, and at least 4 years' experience working in the field of cervical plates and spinal implants. (Substantial additional work experience could be substituted for the formal engineering degree).

2. Globus' Position

A person having ordinary skill in the art would have a Bachelor's or equivalent degree in Mechanical Engineering or a related discipline (e.g. biomechanics or biomedical engineering), and at least five years of experience. The experience would consist of a) designing, developing, evaluating and/or using prosthetic devices, b) anatomy, physiology and biology of soft and calcified tissues including bone healing and fusion, and c) biomechanical and functional loading of orthopedic implants. Alternatively, a person of ordinary skill in the art could have an advanced degree, in the technical disciplines provided above, or a Doctor of Medicine, and at least two years of experience in the subject areas provided above. Alternatively, a person of

ordinary skill in the art could have an advanced degree, in the technical disciplines provided above, or a Doctor of Medicine, and at least two years of experience in the subject areas provided above.

V. AGREED CONSTRUCTIONS

The parties agree on the following constructions:

1. “armature” – an arm
2. “pre-positioned” – pre-installed
3. “configured to” – designed to
4. “adapted to” – designed to

VI. DISPUTED CONSTRUCTIONS

The parties do not agree on the proper construction of the following terms, and request that the Court construe them.

1. **Term: “interlocking portion”**

a) Location in Claims

‘895 Patent - Claims 1-3 and 18-21

‘556 patent - Claims 1-3, 18-20, 28, 34-36, 42-43, 50-51, 58-59, 66-67, and 73-74

b) Stern’s Opening Position

“a part of a cervical plate that connects to a mating part of another plate, such as the cooperative interlocking portion of a revision plate”

The phrase “interlocking portion” is used consistently in the claims and the specification to identify a particular part of a cervical plate. *See generally* ‘895 Patent (D.I. 39, Ex. A) at Abstract, 1:59-2:12; 2:15-38; 5:2-15; 5:30-37; 5:45-51; 6:24-31; 8:23-38; *see also* Figs. 1-4, 7

(because the patents-in-suit share a common specification, for convenience, all citations to the “specification” are to the specification of the ‘895 Patent). “Interlocking portion” describes one of the two parts that attach to one another to provide a “stabilizing interconnection.” The “interlocking portion” describes part of a cervical plate, while the “cooperating interlocking portion” describes a part of a revision cervical plate. The respective “portions” are designed to connect with, or engage one another. These portions, or parts, are what allow “a new plate to be attached to the prior plate.” Provisional (D.I. 39, Ex. C) at 1:25-28; see also ‘895 Patent (D.I. 39, Ex. A) at 1:59-61. This capability is similarly described as “allowing a new plate to be securely fixed to a preexisting plate.” Provisional (D.I. 39, Ex. C) at 3:4-5; *see also* ‘895 Patent (D.I. 39, Ex. A) at 5:40-41 (“allows a new plate to be securely fixed to a preexisting plate”). The specification also describes these parts as cooperatively engaging with one another: “Regardless of the actual design of the interlocking portions, each of the base interlocking portions is designed to cooperatively engage each of the cooperative interlocking portions to provide a stabilizing interconnection between two adjacent plates, the stabilizing interconnection being capable of resisting movement of the adjacent cervical plates in at least one dimension, and wherein the operation of said stabilizing interconnection is independent of the operation of the vertebral anchoring means.” ‘895 Patent (D.I. 39, Ex. A) at 2:3-11. These descriptions of two plates being “attached” or “securely fixed” to one another, and “designed to cooperatively engage” with one another are consistent with the overall description that the “interlocking mechanism” integrated into the two plates allow a revision plate to be “interconnected” with an existing cervical plate. *Id.* at Abstract.

The specification describes several manifestations of an “interlocking portion” connecting to a “cooperative interlocking portion.” In one example, the “interlocking portion” of

the primary plate is a channel formed in the plate. This “interlocking portion” engages with a cooperative armature on the revision plate, which forms the “cooperative interlocking portion.” *Id.* at 2:15-20. This connection between the mating parts is also described as a linkage between the plates. (“A characteristic feature of this plate system is that each of the revision plates includes an interlocking portion that provides a linkage between the plates.” *Id.* at 5:6-9.) The plates “hav[e] a linkage system that both allows a new plate to be securely fixed to a preexisting plate and has coordinating surfaces between the old and new plates that when combined provide stability to and between the plates independent of the vertebral connecting screws.” *Id.* at 5:39-44. These “coordinating surfaces” are the interlocking portion (of the “old” plate) and the cooperative interlocking portion (of the “new” or revision plate). In another example, the specification describes the “interlocking portions” as “linkages and coordinating surfaces,” which refers to an embodiment with a “dovetail slider” type design, where a linkage such as an arm is received by a coordinating surface, such as a groove. See *id.* at 5:45-46; *see also id.* at Figs. 1-4, 7. In yet another example, the “interlocking portion” is a channel along the longitudinal axis of the cervical plate that is “combined” or connects with the mating part of an arm (the cooperative interlocking portion) of the revision plate. See *id.* at 8:23-38; *see also id.* at Fig. 7. As shown above, the intrinsic evidence supports Stern’s construction that an “interlocking portion” is “a part of a cervical plate that connects to a mating part of another plate, such as the cooperative interlocking portion of a revision plate.”

c) Globus’ Answering Position

Plain and ordinary meaning or to the extent construction is necessary: **a part of a cervical plate that locks to a mating part of another plate.**

The starting point for the analysis of “interlocking portion” is with the asserted claims. The term “interlocking portion” is consistently used in the claims of the ‘895 and ‘556 Patents.

See, for example, Exs. A and B to the Joint Appendix.²

The term “interlocking portion” is a simple, non-technical term that means what it says. There is no ambiguity and no disavowal in the ‘895 Patent specification or the file histories for the ‘895 and ‘556 Patents. A person of ordinary skill in the art and for that matter a lay person knows and understands what the term means.

Defendant’s position is confirmed by Plaintiff’s favored Figs 1-4 and 7 (section VI.1.b), pp. 6-8 and the Joint Claim Construction Chart at D.I. 39, p. 2) and by the following exemplar excerpt from the ‘895 Patent specification:

Regardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension—that is independent of the connecting screws.

D.I. 39, Exhibit A - ‘895 Patent, Col. 5, lines 30-37 (emphasis added)³

In contrast, Plaintiff through disjointed citations in his Opening Position, gives “interlocking portion” a meaning that is divorced from the words of the disputed term, the context of the asserted claims and the ‘895 Patent. More particularly, Plaintiff seeks to remove “inter” and “locking” from the disputed term “interlocking portion.” For example, in his Opening Position, Plaintiff rewrites “interlocking portion” as follows: a part of a cervical plate that connects to a mating part of another plate, such as the cooperative interlocking portion of a

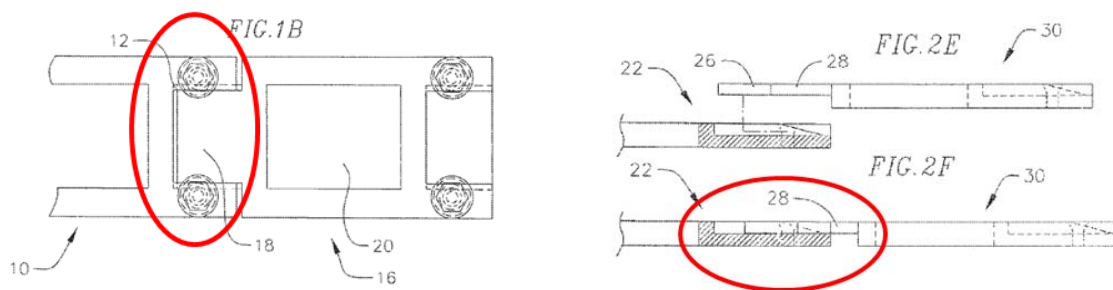
² Joint Appendix, Exhibits A and B contain the asserted claims for the ‘895 Patent and the ‘556 Patent, respectively.

³ A court considers the written description “because it is relevant not only to aid in the claim construction analysis, but also to determine if the presumption of ordinary and customary meaning is rebutted.” *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 (Fed. Cir. 2003) (quoting *Interactive Golf Express, Inc., v. CoompuServe, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001)). The specification is usually “the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

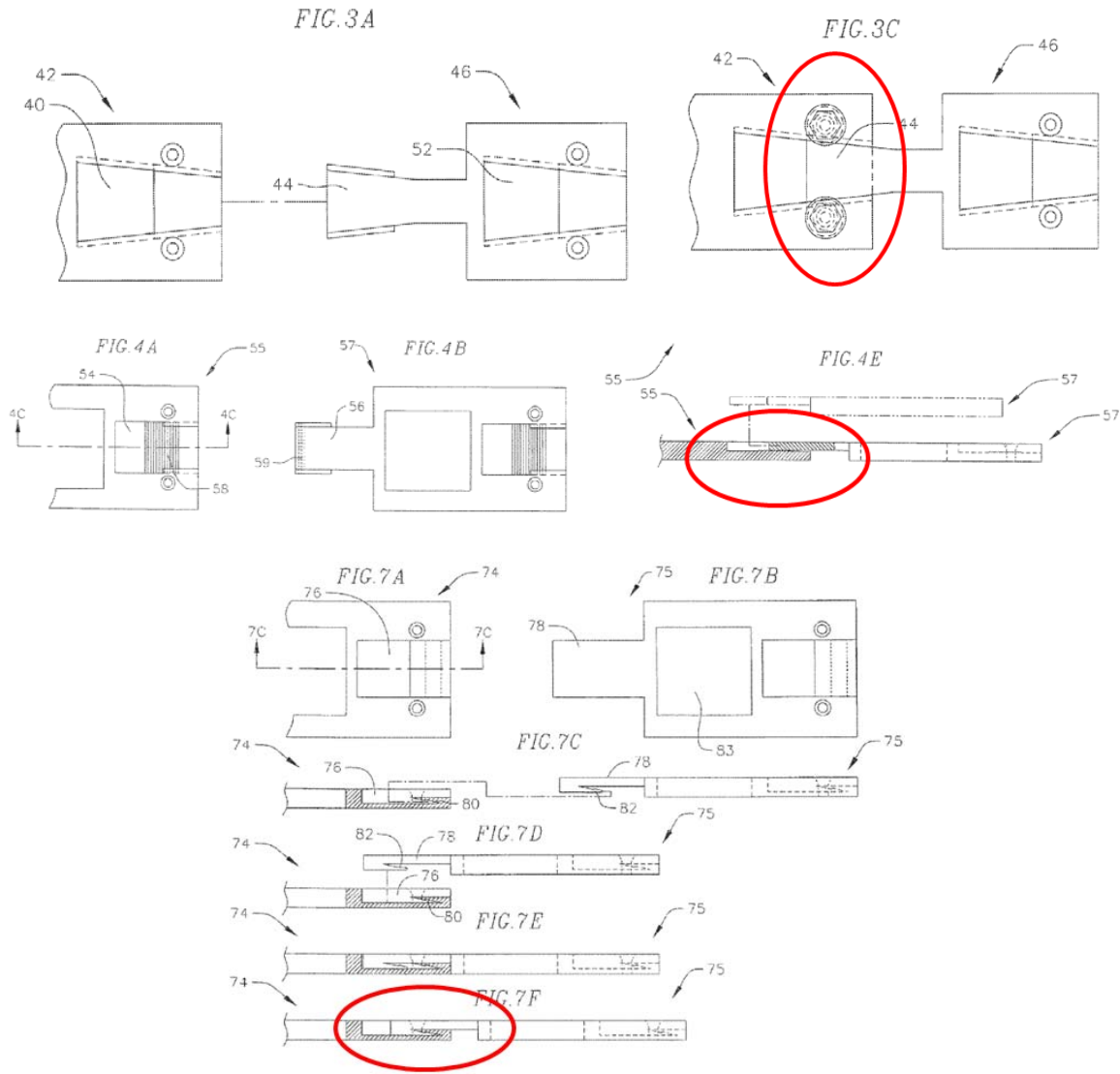
revision plate. Plaintiff's construction, by definition, is incorrect in that it removes the requirement of "locking" from the term "interlocking."⁴ "Interlocking portion" means exactly what it says. It takes its plain and ordinary meaning.

If this Court chooses however to construe "interlocking portion," the only construction supported by the asserted claims and the '895 Patent specification is Defendant's alternate construction, that being **a part of the cervical plate that locks to a mating part of another plate**. This construction is in harmony with the asserted claims and the '895 Patent specification, in that for example it preserves the requirement of "locking." Taken as a whole, "interlocking portion" translates perfectly in view of the asserted claims and '895 Patent specification to: **a part of the cervical plate that locks to a mating part of another plate**.

Additionally, Plaintiff's citation in his Opening Position and in the Joint Claim Construction Chart to his favored Figs. 1-4 and 7 supports Defendant's alternate construction. More particularly, from the '895 Patent specification the "construct" shown in Figures 1-4 and 7, results in the plates being locked to provide torsional stability in at least one direction. See for example, the highlighted portions of Figures 1-4 and 7 as follows:



⁴Despite Plaintiff's position on claim construction, he uses the term "interlocking portion" in his claim construction.



D.I. 39, Exhibit A – ‘895 Patent at Sheets 1, 4-6, 8 and 12 of 43.

The corresponding description for Figs. 1-4 and 7 depicted above, further describes the requirement of “locking.” See for example, D.I. 39, Exhibit A, ‘895 Patent at Fig. 1, Col. 5, line 59-Col. 6, line 4, and Col. 7, lines 21-26; Fig. 2, Col. 24-39 and Col. 7, lines 21-26; Fig. 3, Col. 6, line 54-Col. 7, line 3 and Col. 7, lines 21-26; Fig. 4, Col. 7, lines 21-33; and Fig. 7, Col. 8, lines 26-38).

In conclusion, “interlocking portion” takes its plain and ordinary meaning, or in the alternative, takes the meaning of: **a part of the cervical plate that locks to a mating part of another plate.**

d) Stern’s Reply Position

“a part of a cervical plate that connects to a mating part of another plate, such as the cooperative interlocking portion of a revision plate”

Globus equates “interlocking” with “locking.” If those two terms had the same meaning, there would be no need to construe “interlocking portion.” But they do not have the same meaning. Specifically, the patents-in-suit identify the interlocking portion as cooperatively engaging, or being securely fixed to the mating part of another cervical plate. This supports Stern’s construction of “interlocking portion” as “a part of a cervical plate that connects to a mating part of another cervical plate....” The patents also provide specific examples: the interlocking portion connects to the cooperative interlocking portion, which is the example included in Stern’s construction.

The real difference in the parties’ proposed construction is whether the two mating portions connect together or lock together. First, “lock” typically has a connotation of completely preventing movement in all directions, which would mean not allowing the mating portions to move with respect to one another. However, the ’895 Patent discloses that while these mating portions attach, engage or connect to one another, they can also be taken apart. The examples in the figures show that the plates can be moved toward each other to disengage. The term “lock” in the patent means to prevent movement in at least one direction, or “to provide torsional stability in at least one direction,” but the jury may be misled by the colloquial meaning or typical connotation of lock, and impart a meaning different than described in the patent. The

patent also describes embodiments with elastic band or buttress-fit connections, which also contain interlocking and cooperative interlocking portions. Globus's construction would not apply to these embodiments, and would therefore require multiple constructions for the same term. Globus's construction is improperly reading in limitations from a particular embodiment, and a construction that does not cover all embodiments is incorrect.

Globus argues that Stern is attempting to "walk away" from the disclosure of the '895 Patent by citing to the Provisional for the statement that "[t]he current invention is directed to an improved anterior cervical plate that allows a new plate to be attached to the prior plate, so that the old plate does not have to be removed." Provisional (D.I. 39, Ex. C) at 1:25-28. Yet the Provisional application is explicitly incorporated by reference, and in addition, that same statement is explicitly made in the '895 Patent as well: "The current invention is directed to an improved anterior cervical plate that allows a new plate to be attached to the prior plate, so that the old plate does not have to be removed." '895 Patent (D.I. 39, Ex. A) at 1:59-61; *see also* 4:61-64, with similar statement of purpose: "The current invention is directed to an improved revisable anterior cervical plate system that allows for a new plate to be attached and integrated into the prior plate, such that the old plate does not have to be removed during a revision surgery." Stern is not attempting to circumvent the disclosure of the '895 Patent specification, but instead is pointing out the consistent disclosure across the Provisional and the patents-in-suit that the invention allows for a revision plate to be attached to an existing plate.

Stern's construction is also consistent with all the figures cited by Defendant. On the other hand, Defendant's construction admittedly only applies to certain claims and embodiments, and is intentionally too narrow to cover all the embodiments of the patent. Thus Defendant's construction is improperly importing limitations from specific embodiments into the claims,

thereby unduly narrowing the meaning of the claim terms. Defendant requires that the mating surfaces lock together, even though the patent explicitly discloses that they can “attach” or “engage,” yet still allow movement to decouple the mating pieces. Adopting such a construction would not assist the jury or simplify understanding of the claim, as the jury is likely to import the connotation of “lock” that requires restriction of all movement, and not the meaning of “lock” as used in the patent, which Defendant admits means “to provide torsional stability in at least one direction.” Thus, “connect” is more accurate than “lock,” and is consistent with the specification’s description of the mating portions attaching and engaging with each other.

e) Globus’ Sur-Reply Position

Plain and ordinary meaning or to the extent construction is necessary: **a part of a cervical plate that locks to a mating part of another plate.**

Plaintiff’s position on “interlocking portion” ignores the fundamental tenet of claim construction that proper claim construction begins with the language of the claims. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F. 3d 1576, 1582 (Fed. Cir. 1996). “In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that patentee chose to use to particularly point [] out and distinctly claim [] the subject matter which the patentee regards as his invention. 35 U.S.C. § 112, § 2.” *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F. 3d 1294, 1298 (Fed. Cir. 2003) (quoting *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 56 F. 3d 1323, 1331 (Fed. Cir. 2001) (internal quotes omitted))(emphasis added).

Plaintiff’s claim construction ignores its chosen term, a term it relied on in prosecution, in favor of a rewrite that drops “inter” and “locking” from the term “interlocking.” Plaintiff’s claim construction further ignores the fact that each and every asserted independent claim carries the

term “interlocking,” a term that takes its support from the specification, including Plaintiffs favored Figs 1-4 and 7, as further highlighted by Plaintiff’s own words which are as follows:

Regardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws.

Several variants of this basic design are shown in FIGS. 1 to 16, all of which incorporate the basic innovation of having a linkage system that both allows a new plate to be securely fixed to a preexisting plate and has coordinating surfaces between the old and new plates that when combined provide stability to and between the plates independent of the vertebral connecting screws.

D.I. 39, Exhibit A - ‘895 Patent, Col. 5, lines 30-37 (emphasis added).

Plaintiff further ignores the fact that claim construction is not conducted in a vacuum. For example, all independent claims of the ‘895 Patent and independent claims 22, 28, 36, 44, 52, 60, 68 of the ‘566 Patent require interlocking between the pre-positioned cervical plate and the revision cervical plate that results in “permanently securing” the plates.^{5,6} Exhibits A and B to the Joint Appendix.

Plaintiff further ignores the fact that its favored Figures 1-4 and 7 are directed to a fixed rather than dynamic system. Plaintiff’s Introduction highlights this distinction by noting that “Dr. Stern also has additional patents (e.g., U.S. Pat. Nos. 8,070,749 and 9,095,381) with claims directed to different embodiments not at issue in this litigation.” (Emphasis added) (Section I.A.,

⁵ The requirement of “permanently securing” was added during the prosecution of the ‘895 Patent to overcome a prior art challenge. See the Joint Appendix at Exhibit L, ‘895 Patent File History, Response to Final Office Action dated 4/12/2013, pp. 2, 5, and 7-8; Exhibit M, Advisory Action dated 5/10/2013, p. 2; and Exhibit N, Response to Advisory Action dated 5/28/2013, pp. 2, 5-6 and 7-8.

⁶ Remaining asserted independent claims 1 and 20 of the ‘556 Patent requires that the interconnection “is capable of resisting movement” and independent claims 75 and 76 are method claims that are “means” based. Joint Appendix, Exhibit B.

p. 2) In addition to and contra to the position taken by Plaintiff in Plaintiff's Reply Position, none of the asserted claims read on "elastic bands" (Joint Appendix, Exhibits A and B) and Plaintiff dismissed, with prejudice, the '381 patent (D.I. 40) and the corresponding charge of infringement based on "buttress-fit connections."

Simply put, contra to Plaintiff's baseless attack, one does not read limitations into the claim when one cites to the claim term as supported by the specification and adopts, wholesale, the plain and ordinary meaning or in the alternative, the meaning that naturally flows from the claim term as supported by the intrinsic evidence: **a part of a cervical plate that locks to a mating part of another plate.**

2. **Term: "cooperative interlocking portion"**

a) Location in Claims

'895 Patent: Claims 1 and 18-21

'556 Patent: Claims 1, 18-20, 22, 28, 29, 34-38, 40, 42-46, 48, 50-52, 56, 58-62, 64, 66-71, and 73-76

b) Stern's Opening Position

"a part of a revision cervical plate that connects with a mating part of another plate, such as the interlocking portion of a cervical plate"

This term literally fits together with the first term "interlocking portion." As described in part above, the "cooperative interlocking portion" is a part of the revision plate that connects with a mating part of a primary plate (the "interlocking portion"), to form a stabilizing interconnection. The respective "coordinating surfaces" of the interlocking portions and cooperative interlocking portions connect or combine with one another to provide the stabilizing

interconnection. *See e.g.*, ‘895 Patent (D.I. 39, Ex. A) at 5:30-37; 8:23-38. As noted above, it is the “cooperative interlocking portion” of the revision plate, connecting with the mating “interlocking portion” of the cervical plate, that allow the two plates to be “attached” or “securely fixed” to one another. *Id.* at 1:59-61; Provisional (D.I. 39, Ex. C) at 3:4-5. In one example, the “cooperative interlocking portion” is an arm on the revision plate that connects with a mating part of a channel (the interlocking portion) along the longitudinal axis of the cervical plate. *See* ‘895 Patent (D.I. 39, Ex. A) at 8:23-38; *see also id.* at Fig. 7.

Both the language of the relevant claims, as well as the discussion in the specification support Stern’s proposed construction that the “cooperative interlocking portion” is “a part of a revision cervical plate that connects with a mating part of another plate, such as the interlocking portion of a cervical plate.”

c) Globus’ Answering Position

Plain and ordinary meaning or to the extent construction is necessary: **a part of a revision cervical plate that locks with a mating part of another plate.**

In construing “cooperative interlocking portion,” the same logic and reasoning applies as for the disputed term “interlocking portion.” More particularly, in the ‘895 Patent specification “cooperative interlocking portion” is described as follows:

In such an embodiment the base interlocking portion is designed to engage a revision cervical plate, the revision cervical plates having its own vertebral anchoring means, an additional integrated base interlocking portion and an additional integrated cooperative interlocking portion. Regardless of the actual design of the interlocking portions, each of the base interlocking portions is designed to cooperatively engage each of the cooperative interlocking portions to provide a stabilizing interconnection between two adjacent plates, the stabilizing interconnection being capable of resisting movement of the adjacent cervical plates in at least one dimension, and wherein the operation of said stabilizing interconnection is independent of the operation of the vertebral anchoring means.

D.I. 39, Exhibit A - ‘895 Patent, Col. 1, line 65-Col. 2, line 12 (emphasis added)

* * *

Although the figures and following discussion will provide a detailed description of a number of exemplary embodiments of the cervical plate system of the current invention, it should be understood that any number of designs can be used to achieve the basic goal of the system. For example, in their basic form each of the exemplary plating systems include an existing plate and a revision plate each designed to be anchored to a vertebral bone through a vertebral anchoring means, such as, a connecting screw. A characteristic feature of this plate system is that each of the revision plates includes an interlocking portion that provides a linkage between the plates. The linkage can be either flexible or rigid, of any suitable design such that the two plates can be lockingly connected without removal of the existing plate. These linkages in turn can be locked rigidly between the plates (in a so-called fixed system), or can be allowed to travel to a limited degree to allow for settling (in a so-called dynamic system). The choice of whether to use a fixed or dynamic system is left to the surgeon.

D.I. 39, Exhibit A - '895 Patent, Col. 4, line 65-Col. 5, line 16 (emphasis added)

* * *

Regardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws.

Several variants of this basic design are shown in FIGS. 1 to 16, all of which incorporate the basic innovation of having a linkage system that both allows a new plate to be securely fixed to a preexisting plate and has coordinating surfaces between the old and new plates that when combined provide stability to and between the plates independent of the vertebral connecting screws.

D.I. 39, Exhibit A - '895 Patent, Col. 5, lines 30-44 (emphasis added)

Plaintiff's construction in contrast to what is described as noted above in the '895 Patent specification, removes "cooperative" and "locking" from "cooperative interlocking portion," in favor of a definition that ignores the asserted claims and the '895 Patent specification. More particularly, Plaintiff's construction for the disputed term "cooperative interlocking portion" is as follows: a part of a revision cervical plate that connects with a mating part of another plate, such

as the interlocking portion of a cervical plate.⁷ Once again, Plaintiff's construction of the disputed term removes the requirement of "locking." "Cooperative interlocking portion" takes its plain and ordinary meaning.

To the extent that this court seeks to construe "cooperative interlocking portion," the alternate construction advocated by Defendant is and in harmony with the asserted claims and the '895 Patent specification, that being **a part of a revision cervical plate that locks with the mating part of another plate**. As noted in the discussion section on "interlocking portion," Defendant's alternate construction is consistent with the asserted claims, the '895 Patent specification and Plaintiff's favored cited Fig. 1-4 and 7, as highlighted and supported by citation to the '895 patent specification. Section VI.1.c), pp. 8-12.

In conclusion, "cooperative interlocking portion" takes its plain and ordinary meaning, or in the alternative, takes the meaning: **a part of a revision cervical plate that locks with the mating part of another plate**.

d) Stern's Reply Position

"a part of a revision cervical plate that connects with a mating part of another plate, such as the interlocking portion of a cervical plate"

For the same reasons as stated above with respect to "interlocking portion," Stern's construction should be adopted. Defendant's construction of "cooperative interlocking portion" intentionally excludes embodiments described in the specification and shown in the figures, and improperly reads limitations from specific embodiments into the claims. The dispute is again, over whether the mating parts must always lock, or if they simply connect, attach or engage as described in the specification and shown in the figures. While the patent in some instances uses

⁷ As with the construction of "interlocking" Plaintiff's construction of "cooperative interlocking portion" uses "interlocking portion" in its construction.

the word “lock,” it is with the meaning of restricting movement in one direction (and allowing movement in other directions). In addition, the patent describes the mating pieces as attaching or engaging with one another. To require this to be “locking” ignores the explicit disclosure of the specification, and improperly reads limitations from specific embodiments into all claims. For these reasons, and those stated more fully above, the use of “lock” in the construction is inaccurate, and likely to confuse and mislead the jury, and Stern’s construction should be adopted.

e) Globus’ Sur-Reply Position

Plain and ordinary meaning or to the extent construction is necessary: **a part of a revision cervical plate that locks with a mating part of another plate.**

Plaintiff’s position on “cooperative interlocking portion” is flawed for the same reasons noted concerning its position on “interlocking portion.” As with “interlocking portion,” Plaintiff favors a rewrite that drops “cooperative,” “inter” and “locking” from “cooperative interlocking portion.” The term “cooperative interlocking portion” takes its plain and ordinary meaning or as supported by the specification, means **a part of a revision cervical plate that locks with a mating part of another plate.**

3. **Term: “stabilizing interconnection”**

a) Location in Claims

‘895 Patent: Claims 1, 20, 21

‘556 Patent: Claims 1, 20, 22, 28, 36, 44, 52, 60, 68, 75, 76

b) Stern's Opening Position

“connection between two cervical plates that reduces movement of either plate”

As described above, the interlocking portion of the cervical plate and the cooperative interlocking portion of the revision plate engage with one another to “securely fix[]” or “attach[]” the two plates together. See ‘895 Patent (D.I. 39, Ex. A) at 1:59-61; Provisional (D.I. 39, Ex. C) at 3:4-5. This is what provides the “stabilizing interconnection.” See ‘895 Patent (D.I. 39, Ex. A) at 1:59-61; Provisional (D.I. 39, Ex. C) at 3:4-5. The “stabilizing interconnection” is a connection between two cervical plates. Because of the connection, the movement of both plates is restricted. For example, the “stabilizing interconnection” would reduce movement of the plates if one attempted to pull them apart (whereas if not “securely fixed” or “attached” to each other, one of the plates would be free to move while pulling the plates apart). See ‘895 Patent (D.I. 39, Ex. A) at 1:59-61; Provisional (D.I. 39, Ex. C) at 3:4-5; see also ‘895 Patent (D.I. 39, Ex. A) at Figs. 1-4, 7 (showing revision plate “securely fixed” or “attached” to the cervical plate, forming a stabilizing interconnection, and reducing movement of the revision plate at least in the direction away from the cervical plate).

While the meaning of this phrase may already appear straightforward, it is further clarified in the specification: the stabilizing interconnection is “capable of resisting movement of the adjacent cervical plates in at least one dimension.” ‘895 Patent (D.I. 39, Ex. A) at 2:3-11. The reference is to the “adjacent cervical plates” (plural), referring to both the primary plate and the revision plate. This is the same context provided in the claim. See, e.g., ‘895 Patent Claim 1 (“provide a stabilizing interconnection between adjacent pre-positioned cervical plate and the revision cervical plates, the stabilizing interconnection being capable of resisting movement of the adjacent cervical plates in at least one dimension...”) *Id.* at 15:5-43. Thus the intrinsic

evidence, including both the specification and the claims, support Stern's construction that a "stabilizing interconnection" is a "connection between two cervical plates that reduces movement of either plate."

c) Globus' Answering Position

Plain and ordinary meaning.

Defendant takes the position that "stabilizing interconnection" carries its plain and ordinary meaning. As noted in the '895 Patent specification, the purpose/outcome of the integrated plate is, the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate to "lock the two plates together" providing torsional stability to and between the plates in at least one dimension that is independent of the connecting screws. D.I. 39, Exhibit A - '895 Patent, Col. 5, lines 30-37.

In his Opening Position, Plaintiff recognizes that the disputed term "stabilizing interconnection" equates to a "securely fixed" or "attached" condition. Plaintiff, however, through claim construction equates these conditions to, "reduces movement of either plate." Section VI.3.b), p. 21. In doing so, Plaintiff ignores the fact that the plates, as noted in his favored Figs. 1-4 and 7, are locked together to provide torsional stability in at least one direction. See highlighted figures and citations in Section VI.1.c), pp. 10-11. Plaintiff further ignores the undisputed fact that all asserted claims are directed to a fixed, not a dynamic system. Exs. A and B to the Joint Appendix. Plaintiff's claim construction therefore, is fundamentally flawed in view of the asserted claims and the '895 Patent specification. Rather than reduced movement as Plaintiff advocates, there is no movement in the locked, integrated system of the asserted claims.

To repeat, the "invention" "[r]egardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the

interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws.” D.I. 39, Exhibit A - ‘895 Patent, Col. 5, lines 30-37.

Therefore, in the context of the asserted claims and ‘895 Patent specification, “stabilizing interconnection” takes its plain and ordinary meaning.

d) Stern’s Reply Position

“connection between two cervical plates that reduces movement of either plate”

Defendant provides no construction for this term, and instead argues that it should be given an undisclosed “plain and ordinary meaning.” While the Defendant urges the Court to abdicate its role of construing the claims, and instead to let the jury construe this term, it does not show that Stern’s construction is incorrect. Defendant’s argument goes well beyond the understood meaning of “stabilizing” and instead imports the concept of locking and restricting movement in all directions. Yet this argument not only imports limitations from specific embodiments into the claims, it also reads out specific claim language that notes the “stabilizing interconnection” is “capable of restricting movement of the adjacent cervical plates in at least one dimension.” Claim 1, ‘895 Patent (D.I. 39, Ex. A) at 15:26-28. For example, many embodiments described in the specification and shown in the figures show a revision plate that can be attached or engaged with an existing cervical plate, restricting the movement of the plates in one dimension. When engaged (and forming a stabilizing interconnection), this stabilizing interconnection resists (and therefore reduces) the movement of the plates being pulled apart, but allows the plates to be pushed together to disengage from one another. See e.g., ‘895 Patent (D.I. 39, Ex. A) at Figs. 1-4, 7. Again, even where the patent uses the term “lock” it is referring

to providing “torsional stability to and between the plates in at least one dimension,” as Defendant admits in its discussion of this term. This is consistent with Stern’s construction that the “stabilizing interconnection” is a “connection between two cervical plates that reduces movement of either plate.” In the previously cited figures, the movement of the plates apart from each other is reduced. Thus Stern’s construction is accurate, and consistent with the specification and the figures.

e) *Globus’ Sur-Reply Position*

Plain and ordinary meaning.

Plaintiff appears to misapprehend what the Court’s role is in claim construction. The court does not “abdicate its role” by finding that a claim term has its plain and ordinary meaning. Rather, by doing so, the Court “indulges the heavy presumption that a claim term carries its ordinary and customary meaning.” *CCF Fitness, Inc. v. Brunswick Corp.*, 288 F. 3d 1359, 1366 (Fed. Cir. 2002) (quoting *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 135 F. 3d 985, 989 (Fed. Cir. 1999)).

Here, “stabilizing interconnection” is clear, unambiguous, and means what it says. Stated differently, its plain and ordinary meaning comports perfectly with the claims as a whole in terms of the relationship between the pre-positioned cervical plate and the revision cervical plate. As noted in Defendant’s Reply Position, “Plaintiff ignores the fact that the plates as noted in its favored Figs. 1-4 and 7, are locked together to provide torsional stability in at least one direction.” See highlighted figures and citations in Section VI.1.c), pp. 10-11.

In contrast, Plaintiff’s construction through use of the phrase “reduces movement” is at odds with the asserted independent claims as a whole. “Reduces movement” suggests that there

is less movement. One does not have movement when plates are interlocked or as noted in several independent claims, “permanently” secured.

In sum, “stabilizing interconnection” takes its **plain and ordinary meaning**.

4. **Term: “engage” / “engaged” / “engagement”**

a) Location in Claims

‘895 Patent: Claims 1, 20, 21

‘556 Patent: Claims 1, 20, 22, 24, 28, 29, 30, 36-38, 44-46, 52-54, 60-62, 68-70, 75, 76

b) Stern’s Opening Position

“engage” – “to connect”

“engaged” – “to be connected”

“engagement” – “a connection”

These terms, all variations of “engage,” have their common meaning, which is to connect or be connected. This is confirmed by the context of the usage in the claims, as well as the usage in the specification. For example, the cervical plates are described as “designed to cooperatively engage ... to provide a stabilizing interconnection.” ‘895 Patent (D.I. 39, Ex. A) at 1:59-2:12. Thus when the plates “engage” with each other, they connect with each other. In another example, an arm of a revision plate engages with the channel of a cervical plate to “provide a secure connection between the plates.” *Id.* at 6:24-31; *see also id.* at Figs. 1-4, 7 and 17-22 (all showing that the revision plate and cervical plate connect to one another when they “engage” each other). As noted above, the plates are described as “attached” or “securely fixed” to one another. *See id.* at 1:59-61; Provisional at 3:4-5. This further supports the construction that the plates, when engaged to one another, are connected to one another.

Similarly, the context of the claims shows that engage means connect. The claims note a first part engages with a second part. For example, claim 1 recites “the at least one cooperative interlocking portion of the revision plate is configured to cooperatively **engage** the at least one interlocking portion of the pre-positioned cervical plate to provide a stabilizing interconnection between adjacent pre-positioned cervical plate and the revision cervical plates” (emphasis added), and also recites “wherein the cooperative interlocking portion of the revision cervical plate is configured such that it initially **engages** the interlocking portion of the pre-positioned cervical plate from above a horizontal plane of the pre-positioned cervical plate....” ‘895 Patent (D.I. 39, Ex. A) at 15:5-43 (Claim 1) (emphasis added); *see also id.* at Claims 20, 21; ‘556 Patent (D.I. 39, Ex. B) at Claims 1, 20, 22, 24, 28, 29, 30, 36-38, 44-46, 52-54, 60-62, 68-70, 75 and 76. In each instance, the “engage” terms refer to a part of the revision plate (such as the “cooperative interlocking portion”) that connects to a part of the cervical plate (such as the “interlocking portion”).

Extrinsic evidence also supports the construction of “engage” to mean connect. The dictionary definition of engage is “to come together and interlock” with the example of “the gears engaged.” *See* “engage,” Merriam-Webster.com. Accessed March 14, 2017. <https://www.merriam-webster.com/dictionary/engage>. When gears “interlock” they are not “locked” together in the traditional sense – the teeth of the gears are typically connected to provide a functional connection, and transfer rotation between the gears. However, the gears can typically still be disconnected from one another. In a similar way, the cooperative interlocking portion of the revision plate connects to the interlocking portion of the cervical plate, to connect the two plates (such as by the arm of the revision plate connecting to the groove of the cervical plate); while both plates may remain connected to one another when under tension, and prevent

movement of either plate away from the other, they may still be disconnected by a particular movement where the plates are moved toward each other and the revision plate is lifted up -- the opposite of the movement that connected and “interlocked” the plates. The plates are attached to one another, and securely fixed, and while interlocked, they are not permanently “locked” together.

Both the intrinsic evidence and the extrinsic evidence confirms that as used in the patents-in-suit, the various forms of “engage” mean connect, or to be connected, and Stern’s proposed constructions are appropriate.

c) Globus’ Answering Position

Plain and ordinary meaning or to the extent construction is necessary: **to interlock or cause to interlock.**

Defendant’s position is the disputed terms “engage,” engaged” and “engagement” take their plain and ordinary meaning. The terms are simple, non-technical and mean what they say. There is no ambiguity, no special definition and no disavowal in the specification or file history. In fact, Plaintiff never states why these terms should not take their plain and ordinary meaning. Rather, Plaintiff, in concert with his theme of removing “locking” from the asserted claims, gives these disputed terms an unsupported construction. One of ordinary skill in the art and for that matter a lay person understands what these terms mean. “Engage,” “engaged” and “engagement” takes their plain and ordinary meaning.

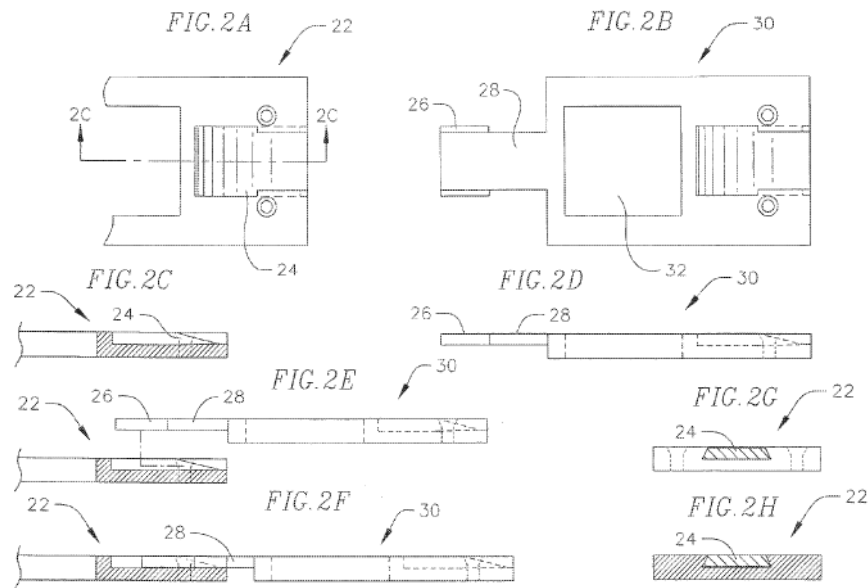
To the extent this court construes these disputed terms, the following excerpts from the ‘895 Patent specification and the corresponding figures from Plaintiffs favored figures 1-4 and 7 and corresponding descriptions from the ‘895 Patent specification are instructive:

As shown in FIGS. 2a and 2b, the old plate (22) has a grooved channel (24), which corresponds to a cooperative groove (26) on the interlock arm (28) of the new plate (30), such that when engaged by the new plate the grooved upper

edge (24) of the old plate overlaps the cooperative groove (26) of the arm (28) of the new plate to provide a secure connection between the two plates. This groove and overlap mechanism allows the arm (28) of the new plate (30) to snap into position from above and then to lock (as shown in FIGS. 2c to 2f) so that it may be positioned from above and does not have to be fed in parallel to the previously placed plate (22), as in the embodiment shown in FIG. 1. FIGS. 2g and 2h provide detailed cross-sectional diagrams of the grooved channel (24) of the old plate and arm (28) of the new plate, respectively.

D.I. 39, Exhibit A - '895 Patent, Col. 6, lines 25-31 (emphasis added)

* * *



* * *

Again, as discussed above, the interlocking grooves on the channel of the old plate and the arm of the new plate provide a linkage when engaged that can only be moved in a single dimension distally along the longitudinal axis of the original plate thereby providing stability to and between the plates in all other flexural directions.

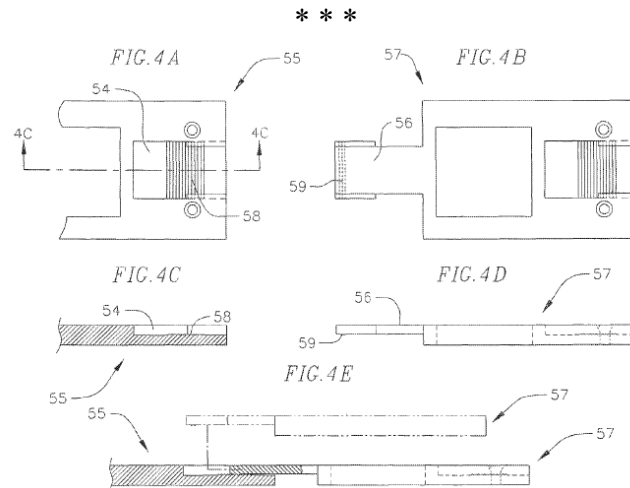
D.I. 39, Exhibit A - '895 Patent, Col. 6, lines 40-45 (emphasis added)

* * *

In addition to grooves that lock the sides of the plate and prevent movement of the arm perpendicular to the longitudinal axis of the plate, as used in the embodiments depicted in FIGS. 1 to 3, as shown in FIGS. 4a to 4e, the linkage mechanism might also be provided with a mechanism for resisting the movement of the plate along that longitudinal axis. In the embodiment shown in these figures both the channel (54) of the old plate (55) and the arm (56) of the new plate (57) are provided with interlocking ridges or teeth (58 & 59, respectively), such that when the plates are engaged (as shown in FIG. 4e) the teeth in the channel of the

old plate and the teeth on the arm of the new plate **engage** to lock the arm into position along the longitudinal axis of the plates.

D.I. 39, Exhibit A - '895 Patent, Col. 7, lines 21-33 (emphasis added)



Defendant's alternate construction, **to interlock or cause to interlock** aligns perfectly with excerpts from the Figures and excerpts from the '895 Patent specification noted above and the asserted claims. Defendant's alternate construction, to interlock or cause to interlock, is further confirmed by Plaintiff's citation in his Opening Position to the extrinsic evidence:

Extrinsic evidence also supports the construction of "engage" to mean connect. The dictionary definition of engage is "**to come together and interlock**" with the example of "the ears engaged." See "engage," Merriam-Webster.com. Accessed March 14, 2017. <https://www.merriam-webster.com/dictionary/engage>. When gears "interlock" they are not "locked" together in the traditional sense – the teeth of the gears are typically connected to provide a functional connection, and transfer rotation between the gears. However, the gears can typically still be disconnected from one another. In a similar way, the cooperative interlocking portion of the revision plate connects to the interlocking portion of the cervical plate, to connect the two plates (such as by the arm of the revision plate connecting to the groove of the cervical plate); while both plates may remain connected to one another when under tension, and prevent movement of either plate away from the other, they may still be disconnected by a particular movement where the plates are moved toward each other and the revision plate is

lifted up – the opposite of the movement that connected and “interlocked” the plates. The plates are attached to one another, and securely fixed, and while interlocked, they are not permanently “locked” together. (Emphasis added)

Section VI.4.b), pp. 26-27

In addition to the confirmatory bolded definition above, an interesting statement is made by Plaintiff in the excerpt above concerning Plaintiff’s reliance on the “concept” that the plates are like, “when gears ‘interlock’ they are not ‘locked’ together in the traditional sense – the teeth of the gears are typically connected to provide a functional connection, and transfer rotation between the gears.” By this statement, Plaintiff misses or ignores the point. When one gear is stationary the second gear cannot rotate, they are locked in at least one direction or dimension.

When the plates “engage,” are “engaged” or are in “engagement,” as described in the ‘895 Patent specification and the asserted claims, they form a “lock” in one or more flexural directions. Put another way, as noted several times by Defendant, the “lock” of the “invention” refers to the plates being “locked” in a least one direction.

In conclusion, the terms engage, engaged, and engagement takes there plain and ordinary meaning, or in the alternative, take the meaning of: **to interlock or cause to interlock.**

d) Stern’s Reply Position

Defendant repeatedly argues that all connections between plates in the patent must be locking, despite the fact that the patent describes the plates as fixed to one another, attached to one another, or making a connection to one another. ’895 Patent (D.I. 39, Ex. A) at 5:38-44; 1:59-61; 6:24-31. And even “lock” is not what it seems: Defendant admits that “lock” as used in the patent has a specific meaning: “to provide torsional stability in at least one direction.” Because of this meaning, use of the word “lock” without further description is not likely to assist the jury, and instead is more likely to mislead the jury into an interpretation of “lock” as

restricting movement in all directions. However, the patent uses the terms “attached,” “fixed,” and “interconnection,” and describes embodiments where movement is only restricted in one direction, making “to connect” a more accurate construction of engage than “to interlock.”

Defendant does not point to any embodiment for which Stern’s construction is not accurate.

Moreover, Defendant appears to concede that its “locking” restriction would not apply to certain embodiments (such as the “dynamic” embodiments, the embodiments shown in Figs. 23 and 24 that use elastic bands, or the buttress-fit embodiments described in the specification), which it unilaterally claims are not covered by any of the asserted claims. Stern disagrees.

Where Defendant does point to the specification, it supports Stern’s proposed construction. In the passage cited by Defendant with respect to these terms, the term “engaged” is specifically equated with a connection: “when **engaged** by the new plate, ... the old plate overlaps the cooperative groove (26) of the arm (28) of the new plate to provide a secure **connection**.” ’895 Patent (D.I. 39, Ex. A) at 6:28-31 (emphasis added). For these reasons, Stern’s proposed construction is most accurate and should be adopted.

e) Globus’ Sur-Reply Position

Plain and ordinary meaning or to the extent construction is necessary: **to interlock or cause to interlock.**

Plaintiff’s true issue is not jury confusion, but rather a construction that impacts infringement. How is the jury misled by the terms “engage,” “engages” and “engagement” taking their plain and ordinary meaning. In kind, why is the jury misled by the terms “interlocking” or “cooperative interlocking?” The only misleading that can or will occur is by re-writing the claims.

“Engage,” “engaged” and “engagement” takes their plain and ordinary meaning. In the alternative, if construction is necessary, it must comport with the claims as a whole, that being: **to interlock or cause to interlock.**

5. **Term: “along”**

a) Location in Claims

‘895 Patent: Claim 1, 2, 20, 21

‘556 Patent: Claims 2, 24, 30, 38, 46, 54, 62, 70

b) Stern’s Opening Position

“located on or over”

The term “along” is used consistently in the patents-in-suit to mean located on or over. Stern contends this is also the plain and ordinary meaning of “along.” The majority of the uses of “along” in the patent are in the context of something being located “along” a particular axis. For example, Fig. 1C of the ‘895 Patent shows a groove in a cervical plate “along the longitudinal axis.” ‘895 Patent (D.I. 39, Ex. A) at 5:59-63; *id.* at Fig. 1C. The plain and ordinary meaning of “along” in the context of along a particular axis means located on or over that axis. Additional instances in the specification describe a groove that limits movement of the revision plate to a single dimension – “along the longitudinal axis of the original plate....” *Id.* at 6:58-66. Figs. 3A-3C of the ‘895 Patent confirm that this is a path **located on** the longitudinal axis of the original plate. Another example describes “interlocking ridges or teeth” for resisting movement of the plate along the longitudinal axis, and Figs. 4A-4E of the ‘895 Patent confirm that this was referring to movement **on** the longitudinal axis. *Id.* at 7:21-26; *id.* at Figs. 4A-4E. With respect to the claims, Claim 1 provides a good example. The claim includes “at least one

interlocking portion arranged on the cervical plate body **along** a longitudinal axis thereof” and “at least one armature extending from the revision plate body along a longitudinal axis thereof.” These mating surfaces must align, and thus the claim’s use of “along a longitudinal axis” imports the specific meaning of a location on the longitudinal axis, rather than simply parallel or close to. To read “along” more broadly would read it out of the claim entirely, meaning that any point on the cervical plate or revision plate would be “along” the longitudinal axis.

In addition to the intrinsic evidence cited above, extrinsic evidence, in the form of a dictionary definition, is also consistent with Stern’s proposed construction. “Along” is defined as “through, on, beside, over, or parallel to the length or direction of; from one end to the other of: to walk along a highway; to run a border along a shelf.” *See* “along,” Unabridged. Random House, Inc. <http://www.dictionary.com/browse/along> (accessed: March 26, 2017). However, in this case, from the context in which “along” is used both in the specification and the claims, and in view of the relatively small size of the cervical plates, the “beside” or “parallel to” definitions would render the term meaningless, as every position on a cervical plate might be said to be beside or parallel to a specific axis of the plate, such as the longitudinal axis. Thus, the most applicable definitions are on or over.

Stern’s proposed construction is consistent with the usage in the specification and as illustrated in the figures, and is also consistent with the usage and context of “along” in the claims. Stern’s proposed construction is also consistent with the extrinsic evidence, and thus “along” should be construed as “located on or over.”

c) Globus’ Answering Position

On a line or course parallel and close to.

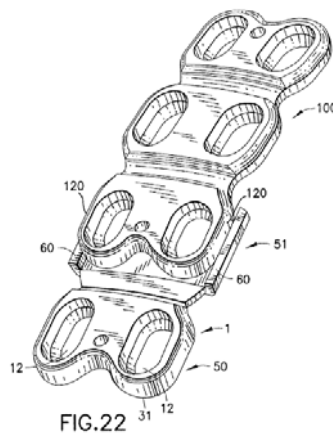
Plaintiff takes a construction of the term “along” that is unduly restrictive, in view of the ‘895 Patent specification and the ‘895 Patent file history. If Plaintiff wanted the term “along” to be restricted to “located on or over,” then Plaintiff should have used those words in drafting the asserted claims. Rather, “along” is used in the asserted claims as follows: “along a central longitudinal axis” or “along a longitudinal axis.” Joint Appendix, Ex. A and B.

During prosecution of the ‘895 Patent, the term “along a central longitudinal axis” and “along a longitudinal axis” were presented to the USPTO. More particularly, as noted in Ex. C to the Joint Appendix, independent claims 1 and 20 as originally filed contained the term “along the central longitudinal axis.” On October 2, 2012, the Examiner rejected claims 1-20, noting as to the term “along the central longitudinal axis thereof” as follows:

7. Initially, the limitation “along the central longitudinal axis thereof” must be considered with the broadest reasonable interpretation. Based on the claims, and for example, at claim 10, it becomes clear that the “at least one armature” 60 of Apfelbaum reads on the limitation of extending upon this axis in that it extends in the same direction as the axis. The two rails 60, viewed in their entirety, extend along the central longitudinal axis of the plate. This interpretation will be utilized throughout the following rejections.

Joint Appendix, Ex. D, ‘895 Patent File History, Non-Final Rejection dated 10/2/2012, p. 2-3.

For reference purposes, the Apfelbaum reference noted by the Examiner is as follows:



Joint Appendix, Ex. E, Apfelbaum, U.S. Pub. No. 2003/0074001, Fig. 22.

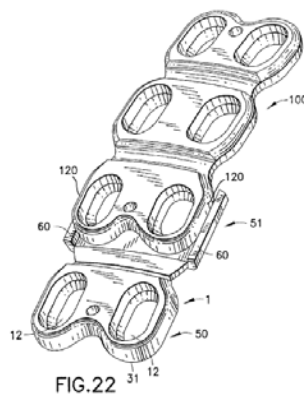
The Applicant on November 5, 2012, responded to the Office Action by amending independent claim 1 to remove the term “central.” Joint Appendix, Ex. F. The Applicant in his corresponding remarks made no mention or representation as to the amended language of claim 1 concerning the removal of “central”, the Examiner’s rejection of claims 1 and 20 concerning “along the central longitudinal axis thereof” or the rejections where the prior art shows the presence of “along” the “longitudinal axis” in the Joint Appendix at Ex. D., pp. 3 and 5.

On 2/1/2013, the Examiner rejected claims 1-20, noting in a final office action as to the term “along a longitudinal axis thereof,” as follows:

6. Initially, the limitation “along a longitudinal axis thereof” must be considered with the broadest reasonable interpretation. Based on the claims, and for example, at claim 10, it becomes clear that the “at least one armature” 60 of Apfelbaum reads on the limitation of extending upon a longitudinal axis in that it extends in the same direction as the longitudinal axis. The two rails 60, viewed in their entirety, extend along a longitudinal axis of the plate. This interpretation will be utilized throughout the following rejections.

Joint Appendix, Ex. G, ‘895 Patent File History, Final Rejection dated 2/1/2013, p. 2-3.

Again for reference purposes, the Apfelbaum reference noted by the Examiner is as follows:



Joint Appendix, Ex. E, Apfelbaum, U.S. Pub. No. 2003/0074001, Fig. 22.

On 4/12/2013, the Applicant amended the independent claims, but did not amend the term “along” as it concerns “a longitudinal axis.” Joint Appendix, Ex. H. In the remarks section, Applicant made no mention whatsoever of the Examiner’s rejection concerning “along a longitudinal axis thereof.” Rather, the entirety of the remarks section was directed to other limitations. Joint Appendix, Ex. H.

Following an Advisory Action on 5/10/2013, that included proposed amendments by Applicant (Joint Appendix, Ex. I), and the filing of an RCE on 5/28/2013 in which no amendments were made concerning the term “along” the “longitudinal axis” (Joint Appendix, Ex. J), the Applicant received a Notice of Allowance. Joint Appendix, Ex. K.

By failing to address or respond to the rejections made by the Examiner at least at the time of the final rejection, the Applicant acquiesced to the Examiner’s position. In addition, the construction for “along” in relation to “a longitudinal axis,” is considered in view of the file history as a whole. Plaintiff’s construction of “located on or over” therefore, by definition, is incorrect as for example noted by the Examiner’s rejections.

Additionally, in reviewing Plaintiff’s Opening Position, Plaintiff notes the following:

In addition to the intrinsic evidence cited above, extrinsic evidence, in the form of a dictionary definition, is also consistent with Stern’s proposed construction. “Along” is defined as “through, on, beside, over, or parallel to the length or direction of; from one end to the other of: to walk along a highway; to run a border along a shelf.” See “along,” Unabridged. Random House, Inc. <http://www.dictionary.com/browse/along> (accessed: March 26, 2017). However, in this case, from the context in which “along” is used both in the specification and the claims, and in view of the relatively small size of the cervical plates, the “beside” or “parallel to” definitions would render the term meaningless, as every position on a cervical plate might be said to be beside or parallel to a specific axis of the plate, such as the longitudinal axis. Thus, the most applicable definitions are on or over. (emphasis added)

Section VI.5.b), pp. 33.

The dictionary definition as noted above clearly comports with the Examiner's statements and the use of the term. Plaintiff's explanation to the contrary is not supported.

In sum, the restricted definition that Plaintiff advocates is counter to the '895 Patent specification and the '895 Patent file history. Defendant's construction of, **on a line or course parallel and close to**, is the correct and supported construction.

d) Stern's Reply Position

Defendant's construction attempts to broaden out "along" so far as to render it meaningless. Under Defendant's construction, any point on a cervical plate would be "along" both a vertical and a horizontal axis, as well as along any edge of the plate. This would render such claim language superfluous, which is improper.

Defendant also argues that Stern acquiesced to a broader definition of "along" used by a patent examiner, when Stern gained allowance of claims on other grounds and did not argue against such definition. However, because allowance was obtained on other grounds, there was no need to address such definition of "along," and thus no acquiescence to such definition. *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1373-74 (Fed. Cir. 2003) ("An applicant's silence in response to an examiner's characterization of a claim does not reflect the applicant's clear and unmistakable acquiescence to that characterization if the claim is eventually allowed on grounds unrelated to the examiner's unrebutted characterization."); *see also Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1345 (Fed. Cir. 2005) ("Prosecution history ... cannot be used to limit the scope of a claim unless the applicant took a position before the PTO.") (quoting *Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324-25 (Fed.Cir.2002)). In addition, the tenets of claim construction differ between prosecution and litigation. During prosecution, the patent office uses a "broadest reasonable interpretation"

standard. In contrast, during litigation, the claims are construed as informed by the teachings of the specification. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“The specification is usually “the single best guide to the meaning of a disputed term.”); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-1317 (Fed. Cir. 2005) (*en banc*). Thus the patent examiner’s definition of “along,” which was not the basis for allowance, is not applicable here. Defendant offers no other reason why Stern’s construction is incorrect. Stern’s construction is based on the usage of “along” in the specification and the claims, and is consistent with the dictionary definition as well. It is therefore the proper construction.

e) Globus’ Sur-Reply Position

Plaintiff is confused as to the events that occurred in prosecution. Specifically, Plaintiff as noted at Defendant’s Answering Position, Section VI.5.c), p. 35, amended its pending independent claim 1 to remove “central” from “central longitudinal axis” in order to distinguish over the cited prior art. Plaintiff failed to overcome the rejection, however, as noted by the Examiner as follows:

6. Initially, the limitation “along a longitudinal axis thereof” must be considered with the broadest reasonable interpretation. Based on the claims, and for example, at claim 10, it becomes clear that the “at least one armature” 60 of Apfelbaum reads on the limitation of extending upon a longitudinal axis in that it extends in the same direction as the longitudinal axis. The two rails 60, viewed in their entirety, extend along a longitudinal axis of the plate. This interpretation will be utilized throughout the following rejections.

Joint Appendix, Ex. G, ‘895 Patent File History, Final Rejection dated 2/1/2013, p. 2-3.

Plaintiff’s action in prosecution and the Examiner’s construction of “along” confirms Defendant’s construction position. “Along” means: **on a line or course parallel and close to**. Plaintiff’s attempt to limit the term is not supported by its actions, the Examiner’s non-biased

interpretation of the term, the term itself or as noted in Defendant's Answering Position, Section VI.5.c) the intrinsic evidence of record.⁸

In sum, as noted in the file history and as supported by the specification, "along" does not mean "located on or over." If Plaintiff wanted that meaning it should have used those words in prosecution. Rather, "along" as noted by the Examiner and as supported by the specification means: **on a line or course parallel and close to.**

6. **Term: "groove"**

a) Location in Claims

'895 Patent: Claims 3, 4, 5, 20

'556 Patent: Claims 3, 4, 5, 20, 24, 30, 38, 46, 54, 62, 70

b) Stern's Opening Position

"an elongated channel or depression"

The patents-in-suit consistently describe a "groove" as an elongated channel or depression. What is identified in the figures confirms that a "groove" is an elongated channel or depression. Figs. 1A-1F of the '895 Patent are described as showing a "simple groove and joint dovetail slider system." '895 Patent (D.I. 39, Ex. A) at 5:45-63. This is a specific variant of the "tongue and groove" system of interlocking pieces, where a protruding tongue is received by an elongated channel or depression (the groove). *See id.* at 5:45-63. The patent also uses the term "groove" interchangeably with "channel," referring to the "groove or channel (40)" in reference to Figs. 3A-3E. *Id.* at 6:54-58. The "groove (40)" depicted in Fig. 3A is an elongated channel.

⁸ Equally incorrect is Plaintiff's statement that Defendant's construction would allow "both a vertical and horizontal axis along any edge of the plate." Plaintiff ignores that in each and every asserted claim "along" does not stand alone, but is modified by horizontal.

In fact, the specification later also refers to 40 as a channel, confirming that the groove is a channel. *Id.* at 7:13-16 (“the **channel (40)** within which the arm (44) of the new plate (46) rests can also be provided with a snap-in piece (50) that would be remove at the time the new plate is installed to ensure that the **groove** remains unfouled prior to surgery.” (emphasis added)).

The claims also use “groove” to refer to an elongated channel or depression. For example, Claim 3 of the ‘895 patent recites “wherein the interlocking portion the of pre-positioned cervical plate comprises a groove integrally formed into at least one of the distal and proximal ends of the body of the cervical plate, and wherein the armature of the revision plate is interlockingly cooperative with said groove.” *Id.* at 15:48-53. The groove is integrally formed into at least an end of the cervical plate, and necessarily is depressed, as it must be able to receive the armature of the revision plate.

Stern’s proposed construction also conforms with the dictionary definition of groove, which describes a groove as “[a] rut, groove, or narrow depression or channel in a surface.” *See* “groove,” The American Heritage® Science Dictionary (Stedman’s Medical Dictionary). Houghton Mifflin Company. <http://www.dictionary.com/browse/groove> (accessed: March 15, 2017).

Stern’s proposed construction of groove is supported by the intrinsic evidence, consistent with the usage of the term in both the specification and claims, and is further confirmed by the dictionary definition. Thus, “groove” should be construed as “an elongated channel or depression.”

c) *Globus’ Answering Position*

Plain and ordinary meaning.

The term “groove” is simple, non-technical, and takes its plain and ordinary meaning. “Groove” as noted in the ‘895 Patent specification and accompanying figures is not restricted to “an elongated channel or depression” as Plaintiff advocates. Rather, the ‘895 patent specification describes “groove” in the following ways:

Again, as discussed above, the interlocking grooves on the channel of the old plate and the arm of the new plate provide a linkage when engaged that can only be moved in a single dimension distally along the longitudinal axis of the original plate thereby providing stability to and between the plates in all other flexural directions. Although only simple groove profiles are shown in this embodiment, it should be understood that any groove profile suitable for interlocking the arm of the new plate with the old plate may be utilized.

D.I. 39, Exhibit A - ‘895 Patent, Col. 6, line 40-48 (emphasis added)

Again although only standard grooves are shown in these embodiments, it should be understood that these linkages could also be provided with locking grooves to positively lock the arm of the new plate into position within the trapezoidal channel of the old plate.

D.I. 39, Exhibit A - ‘895 Patent, Col. 6, line 66-Col. 7, line 3 (emphasis added)

Again although only standard grooves are shown in these embodiments, it should be understood that these linkages could also be provided with locking grooves to positively lock the arm of the new plate into position within the trapezoidal channel of the old plate.

D.I. 39, Exhibit A - ‘895 Patent, Col. 7, lines 51-55 (emphasis added)

Although only simple groove profiles are shown in this embodiment, it should be understood that any groove profile suitable for interlocking the arm of the new plate with the old plate may be utilized.

D.I. 39, Exhibit A - ‘895 Patent, Col. 8, lines 44-49 (emphasis added)

Although only one exemplary groove design has been discussed above, it should be understood that any suitable interlocking groove geometry could be employed in the current embodiment. For example, as shown in FIGS. 11a to 11c, the groove could include a more complicated interlocking surface, such as a chevron (or triangular section) 1010, or as shown in FIGS. 12a to 12c a curved surface 1011, to provide additional stability.

D.I. 39, Exhibit A - ‘895 Patent, Col. 10, lines 19-26 (emphasis added)

It should also be understood that although the groove on each of these embodiments is provided with a convex shape, in this interlocking design the curve could also be concave.

D.I. 39, Exhibit A - '895 Patent, Col. 10, lines 58-61 (emphasis added)

Although not shown, all such systems as shown in FIGS. 9 to 16 could also be provided with groove locks on the edges to the plate, such as those discussed in relation to the other dovetail configurations to provide further stability. In addition, although not shown in the figures, an optional window could also be provided in the plate system to allow for the inspection of the disc space.

D.I. 39, Exhibit A - '895 Patent, Col. 11, lines 31-34 (emphasis added)

The purpose of the “groove” as noted above and in Plaintiff’s favored Figs. 1-4 and 7, is to form a “lock.” The “groove” as noted above, can take many forms. A “groove” therefore takes its plain and ordinary meaning.

d) Stern’s Reply Position

Once again, Defendant provides no proposed construction, and instead urges the court to adopt an unspecified “plain and ordinary meaning.” Without a proposed construction, or any indication of the plain and ordinary meaning, this allows the jury to define this term as it sees fit, shifting the legal requirement of construing the claims from the Court to the jury. This is improper. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). Stern proposes a construction that is consistent with the specification, as well as the dictionary definition. To the extent Globus disagrees with Stern’s proposed construction, it must also contend that Stern’s construction is at odds with the plain and ordinary meaning of the term, meaning that the parties have a genuine dispute regarding the meaning of this term. In such a case, the Court must construe the term. *Id.* at 1361 (“In this case, the “ordinary” meaning of a term does not resolve the parties’ dispute, and claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit.”).

Stern's construction is consistent with the examples from the specification selected by Stern, as well as the dictionary definition of the term; it is also consistent with all of the examples cited by Globus. Each of the "grooves" shown in cited Figures 1-4 and 7 constitutes "an elongated channel or depression," which is why the patent uses the terms channel and groove interchangeably in some instances.

Defendant, with no citation to any support in the specification, argues that the purpose of a groove is to form a lock. But the very portion of the specification cited by Globus ('895 Patent (D.I. 39, Ex. A) at 6:40-48 and 6:66-7:3) specifically distinguishes between a "standard groove" and a "locking groove," confirming that not all grooves are intended to form a lock. A proper construction of "groove" must apply not only to the "locking groove" referenced in the specification, but must also apply to the "standard groove" disclosed in the specification and used in the claims. Stern's construction is accurate, and generally applicable to all instances of the term "groove" in the patents-in-suit. The usage of "groove" in the asserted claims is simply a "groove" and not a "locking groove," confirming the applicability of Stern's construction.

e) Globus' Sur-Reply Position

Plain and ordinary meaning.

Groove is a simple, non-technical term that takes its plain and ordinary meaning. Why Plaintiff feels compelled to interpret groove when the term means what it says is a mystery. Defendant cites to multiple excerpts from the specification in support of the multiple types of groove profiles. Plaintiff's statement as to the distinction between standard grooves and locked grooves is interesting, but unavailing. Groove takes its plain and ordinary meaning.

7. **Term: “overlap” / “overlaps”**

a) Location in Claims

‘895 Patent: Claim 17

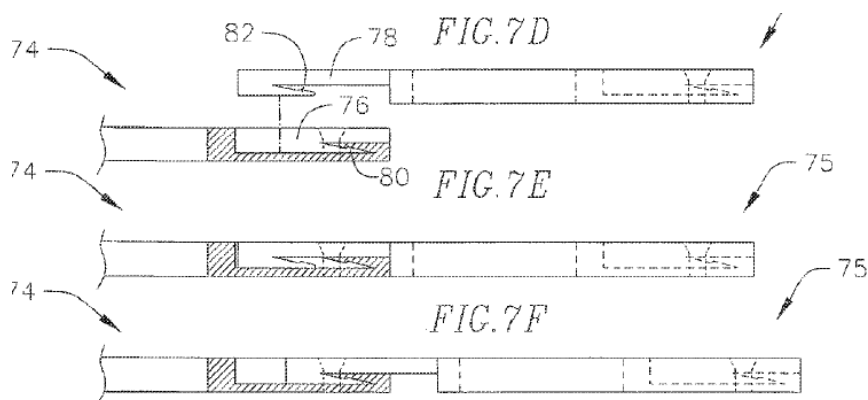
‘556 Patent: Claims 17, 21, 22, 25, 28, 31, 36, 39, 44, 47, 52, 55, 60, 63, 68, 70, 75, 76

b) Stern’s Opening Position

“overlap” – “to extend over or past and cover a part of”

“overlaps” – “extends over or past and covers a part of”

The terms “overlap” and “overlaps” are used generally in two contexts in the patents-in-suit. One is to describe an opening that overlaps the disc space to allow visual inspection. In this instance, the opening extends over and covers a part of the disc space to allow visual inspection. See ‘895 Patent (D.I. 39, Ex. A), Figs. 1-4 and 7, showing “windows” that would extend over and cover a part of the disc space to allow visual inspection. The other context is the arm of a revision plate that overlaps the groove of a cervical plate, such as shown in Figs. 7D-7F.



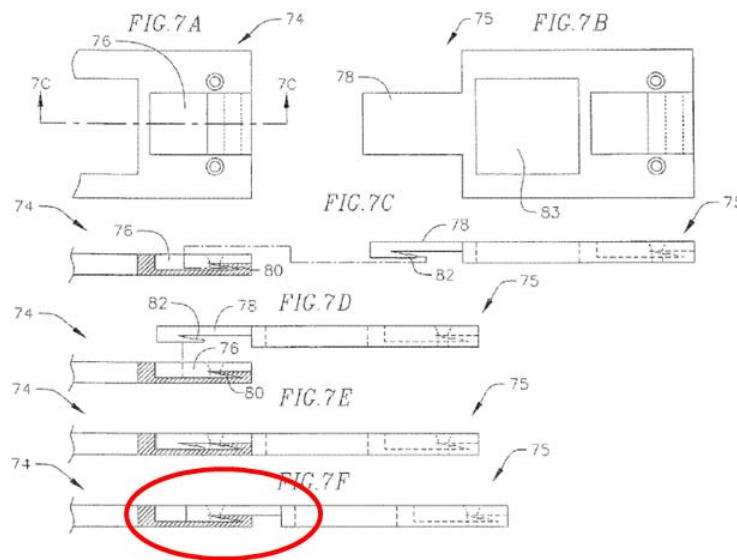
As shown in the figures, the arm (78) extends over and covers a part of the channel (76). This is also the commonly understood construction of overlap: the dictionary definition is “to extend over or past and cover a part of,” as in “[t]he roof shingles overlap each other.” See “overlap,” Merriam-Webster.com. Accessed March 14, 2017. <https://www.merriam-webster.com/dictionary/overlap>.

Stern's proposed construction is consistent with both intrinsic and extrinsic evidence, and therefore "overlap" should be construed as "to extend over or past and cover a part of."

c) Globus' Answering Position

To lie or extend over and cover part of.

Plaintiff's construction of the term "overlap" and "overlaps" purposefully ignores the '895 Patent specification. For example, Plaintiff cites to Fig. 7 in its Opening Position, Section VI.7.b), p. 44. A review of Fig. 7, however, shows the overlap that occurs when one surface lies over another. Specifically, Fig. 7 and an accompanying excerpt from the '895 Patent specification is reproduced as follows:



As shown in FIGS. 7d to 7f, this and overlapping groove mechanism allows the arm (78) of the new plate (75) to snap into position from above and then to lock as it is pulled proximal to the new plate so that it may be positioned from above and does not have to be fed in parallel to the previously placed plate (74).

D.I. 39, Exhibit A - '895 Patent, Col. 8, lines 32-38 (emphasis added)

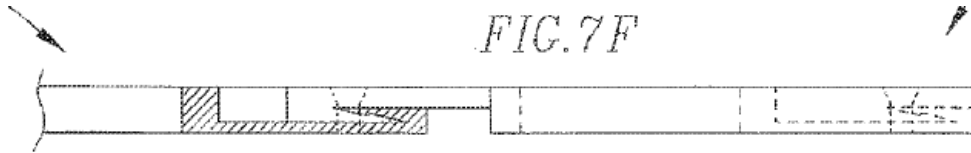
The same overlap condition is shown and described concerning Plaintiff's remaining favored Figs. 1-4 is as follows: D.I. 39, Exhibit A, '895 Patent, Fig. 1B, Col. 5, line 64-Col. 6, line 9; '895 Patent, Fig. 2F, Col. 6, lines 24-36; '895 Patent, Fig. 3C, Col. 6, line 54-Col. 7, line 3; and '895 Patent, Fig. 4E, Col. 21-33.

As for Plaintiff's identification of extrinsic evidence, including the citation to "The roof shingles overlap each other," (Opening Position, Section VI.7.b), pp. 44) this definition includes the concept of one lying over the other and is in comport with what is shown and described in the '895 Patent specification and Figs. 1-4 and 7 above.

In conclusion, Defendant's definition **to lie or extend over and cover part of** includes Plaintiff's construction of "to ... extend over and cover part of." Defendant's construction therefore fits with the '895 Patent specification and with the extrinsic evidence cited by Plaintiff.

d) Stern's Reply Position

The parties' respective constructions of "overlap" are very similar, with the only discernible difference being Defendant's use of the terminology of "to lie or extend over" instead of "to extend over or past." With the purpose of claim construction being to assist the jury in determining the meaning of the claims, the use of words that will most easily be understood by jurors is important. Both constructions use the phrase "extend over." Stern's construction implies the use of "extend past," meaning that a first object overlapping a second object can extend past the first object – the ends of the objects do not have to be coterminous. This is consistent with the usage in the patent, including the examples cited by Defendant. For example, in Figure 7, the arm (78) of the revision plate extends over and covers part of channel (76). The arm also extends past the end of the channel when the plates are engaged.



Defendant's construction does not specifically address this aspect of an overlap. In addition, Defendant's construction implies the use of "to lie over" which appears to be redundant of "extend over" and uses less common language. Stern's construction addresses the situation where the overlapping objects are not coterminous, is consistent with the patent as well as the dictionary definition, and thus is the most accurate construction.

e) Globus' Sur-Reply Position

To lie or extend over and cover part of.

It is true that the respective positions of the parties are similar, but they are also distinct. For example, Plaintiff's construction purportedly captures a distinction not required by the claims. Specifically, the claims do not call for the concept of "extend past" or that objects are not "coterminous." In addition, Plaintiff's construction "to extend over" could easily be interpreted as the relationship between two surfaces that are not in contact, where one extends over, without touching, the other. Defendant's construction solves these issues. "To lie or extend over" includes the concept of two surfaces in contact, as specifically noted and called for in each one of the asserted independent claims. It is not redundant as Plaintiff suggests. In sum, Defendant's construction is the correct construction.

8. **Term: "revision cervical plate"**

a) Location in Claims

'895 Patent: Claim 1, 17-21

'556 Patent: Claims 1-3, 18-20, 22, 28, 34-36, 42-44, 50-52, 58-60, 66-68, 73-76

b) Stern's Opening Position

“a cervical plate with specialized features for connecting to another cervical plate”

The patent describes a “revision cervical plate” as having an additional integrated base interlocking portion (for connecting to another revision plate), and a cooperative interlocking portion (for connecting to the pre-positioned plate). See ‘895 Patent (D.I. 39, Ex. A) at 1:62-2:12. These specialized features allow the revision plate to cooperatively engage an adjacent plate, and provide a stabilizing interconnection between the plates. *Id.* “Regardless of the actual design of the interlocking portions, each of the base interlocking portions is designed to cooperatively engage each of the cooperative interlocking portions to provide a stabilizing interconnection between two adjacent plates....” *Id.* at 2:3-7. Put even more simply, “[t]he current invention is directed to an improved anterior cervical plate that allows a new plate [revision plate] to be attached to the prior plate, so that the old plate does not have to be removed.” *Id.* at 1:59-61. The specialized features of both the pre-positioned plate and the revision plate are what “allows a new [revision] plate to be attached to the prior plate.” *Id.*

The claims specifically describe the specialized features of the revision plate for connecting it to a cervical plate. For example, Claim 1 of the ‘895 Patent recites numerous specialized features: “at least one revision cervical plate defining a revision plate body having at least a **second vertebral anchoring mechanism** configured to attach to a second vertebral body and **at least one armature extending from the revision plate body along a longitudinal axis thereof**, the at least one **armature having a cooperative interlocking portion disposed thereon**; wherein the at least one **cooperative interlocking portion of the revision plate is configured to cooperatively engage the at least one interlocking portion of the pre-positioned cervical plate** to provide a stabilizing interconnection between adjacent pre-

positioned cervical plate and the revision cervical plates, the stabilizing interconnection being capable of resisting movement of the adjacent cervical plates in at least one dimension; wherein the **cooperative interlocking portion of the revision cervical plate is configured such that it initially engages the interlocking portion of the pre-positioned cervical plate from above** the upper horizontal face of the pre-positioned cervical plate.” *Id.* at 15:14-33 (Claim 1) (emphasis added). The revision plate of Claim 1 includes a vertebral anchoring mechanism, an armature (with a cooperative interlocking portion), where the cooperative interlocking portion must be configured to engage an interlocking portion of a cervical plate, and it must be configured such that it initially engages the interlocking portion of the pre-positioned cervical plate from above. See *id.* All of these are examples of specialized features that allow this particular type of cervical plate (a revision cervical plate), to connect to another cervical plate.

Stern’s proposed construction follows the teaching of the specification, and is consistent with the usage and context of “revision cervical plate” in the claims. Thus, “revision cervical plate” is properly construed as “a cervical plate with specialized features for connecting to another cervical plate.”

c) *Globus’ Answering Position*

Plain and ordinary meaning.

Defendant’s position on “revision cervical plate” is the easier to define because Plaintiff’s Opening Position, Section VI.8.b), pp. 48-49, is replete with references to “revision.” Plaintiff uses the term “revision” in its constructions for “interlocking portion” and “cooperative interlocking portion,” and more importantly, it is the core of his “invention.” Specifically, the ‘895 Patent specification notes as follows:

Although the figures and following discussion will provide a detailed description of a number of exemplary embodiments of the cervical plate system of

the current invention, it should be understood that any number of designs can be used to achieve the basic goal of the system. For example, in their basic form each of the exemplary plating systems include an existing plate and a revision plate each designed to be anchored to a vertebral bone through a vertebral anchoring means, such as, a connecting screw. A characteristic feature of this plate system is that each of the revision plates includes an interlocking portion that provides a linkage between the plates.

D.I. 39, Exhibit A - '895 Patent, Col. 4, line 61-Col. 5, line 9 (emphasis added)

Regardless of the ultimate design, both the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws.

D.I. 39, Exhibit A - '895 Patent, Col. 5, lines 30-37 (emphasis added)

Plaintiff's attempt, once again, to rewrite the asserted claims, this time to remove the basic concept of "revision" and to replace it with a definition that includes any cervical plate, is incorrect.

The asserted claims are directed to revision surgery. By removing "revision" from "revision surgical plate," Plaintiff explicitly walks away from the core of his "invention."

The term "revision cervical plate" is exactly what it says and no additions or subtractions are necessary or warranted. It is clear, unambiguous and in comport with the entirety of the '895 Patent specification and the asserted claims. "Revision cervical plate" take it plain and ordinary meaning.

d) Stern's Reply Position

Defendant yet again fails to offer a proposed construction, instead arguing for an unspecified "plain and ordinary meaning." Even more troubling is that fact that Defendant specifically identified this term as needing construction. However, rather than construe the term,

Defendant offers no assistance to the jury, and now argues that this term does not even need construction.

Stern's construction is consistent with the use of this phrase in the patent. The revision cervical plate is the "new" plate that is attached to the "prior" plate. "The current invention is directed to an improved anterior cervical plate that allows a **new plate to be attached to the prior plate**, so that the old plate does not have to be removed." '895 Patent (D.I. 39, Ex. A) at 1:59-61 (emphasis added); *see also* 4:61-64 ("The current invention is directed to an improved revisable anterior cervical plate system that allows for a **new plate to be attached and integrated into the prior plate**, such that the old plate does not have to be removed during a revision surgery.") (emphasis added).

The patent describes specifically how it is that the "new" plate can be attached to the existing plate. The "new" or "revision" plate contains specialized features for connecting to another plate, such as an arm or armature. The revision plate generally includes a "cooperative interlocking portion," the mating part that attaches to a mating part on an existing cervical plate (the "interlocking portion").

Defendant appears to argue that a revision plate is simply a revision plate, and therefore needs no construction. Defendant even appears to chastise Stern for not including "revision" in his construction. However, this circular logic ignores what defines a revision plate and differentiates it from any other cervical plate: the specialized features for connecting to another plate. Even the portion of the specification cited by Defendant supports Stern's construction. For example, Defendant cites to the '895 Patent at col. 4, line 61-col. 5, line 9, which discusses existing plates and revision plates, and notes that the characteristic feature is that the revision plate includes an interlocking portion that provides a linkage between plates. In other words, the

revision plate is a cervical plate with specialized features for connecting to another cervical plate, namely an existing plate. The cited portion at col. 5, lines 30-37 is similar. It describes that the “interlocking portion” of the revision plate cooperates with the “base interlocking portion” of the original plate. Again, the revision plate must have specialized features that allow it to connect to another plate.

Defendant also incorrectly argues that Stern’s construction applies to “any” cervical plate. Stern’s construction specifically requires that a revision plate is a cervical plate with specialized features for connecting to another cervical plate – the very thing that makes it a revision plate and not a standard cervical plate. Stern’s construction is accurate and consistent with the patent, and is the proper construction of “revision cervical plate.”

e) Globus’ Sur-Reply Position

Plain and ordinary meaning.

Of all of Plaintiff’s positions, the one it takes on “revision” is the most egregious. Plaintiff seeks to change what it states is a fundamental characteristic of its invention, in favor of nothing more than cervical plate to plate connections. Cervical plates with “specialized features” to connect to another cervical plate were cited en masse in prosecution. To combat this, Plaintiff routinely made the distinction that these types of cervical plates were not designed for revision surgery. For example, Plaintiff states as follows:

The Examiner rejected claims 1 to 4, 4, 7, 9 to 12, 14, 15, 17, 18 and 20 under 35 USC § 102(e) as anticipated by Butler et al. (US Pub. No. 2005/0137597). Applicant respectfully requests reconsideration of this rejection in light of the newly amended claims. In particular, newly amended independent claims 1 and 20 of the instant invention recite, in relevant part, that the plate system must include a structure wherein:

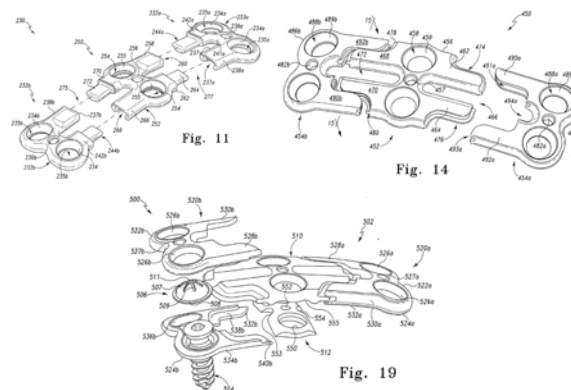
at least one revision cervical plate defining a revision plate body having upper and lower horizontal faces, wherein at least a portion of the lower horizontal face is configured to be disposed adjacent a

second vertebral body, at least a second vertebral anchoring mechanism configured to attach to the second vertebral body, and at least one armature extending from the revision plate, the at least one armature having a cooperative interlocking portion disposed thereon;

and,

wherein the engagement between the pre-positioned and revision cervical plates is initially formed by positioning the at least one armature of the revision cervical plate above the upper horizontal face of the pre-positioned cervical plate and moving at least a portion of the revision plate in the direction of the second vertebral body, and wherein the cooperative interlocking portion of the revision cervical plate is configured such that when engaged to the interlocking portion of the pre-positioned cervical plate a portion of the at least one armature is positioned atop a portion of the upper horizontal face of the pre-positioned cervical plate.

As shown in the figures from Butler reproduced below, these claim terms are not demonstrated in the embodiments provided by that prior art publication. In particular, as shown, the plates are either interconnected from the side inward toward the pre-positioned plate (Figs. 11 and 14), or are created by two-piece revision plates where the lower face is not configured to be positioned adjacent a vertebral body (Fig. 19).



These differences are, in turn, directly related to the different purpose for which the Butler plates are designed. In particular, the plates described in the Butler publication are not designed for use as revision plates, but rather are designed to allow for a “dynamizing” action between the components of the cervical plate. (Butler, Abstract) As a result, Butler is not concerned with the complications that would arise in attempting to interconnect the elements of a plate that has been pre-positioned with a new revision plate.

See Joint Appendix, Exhibit O, ‘556 Patent File History, Response to Office Action dated 5/20/2014, pp. 23-24 (emphasis added).

By seeking to remove “revision” from “revision cervical plate,” Plaintiff further walks away from the fact that by definition, a “revision cervical plate” is implanted as part of a revision surgery, well after a pre-positioned cervical plate has been implanted.

Revision cervical plate takes its **plain and ordinary meaning**.

9. **Term: “latch”**

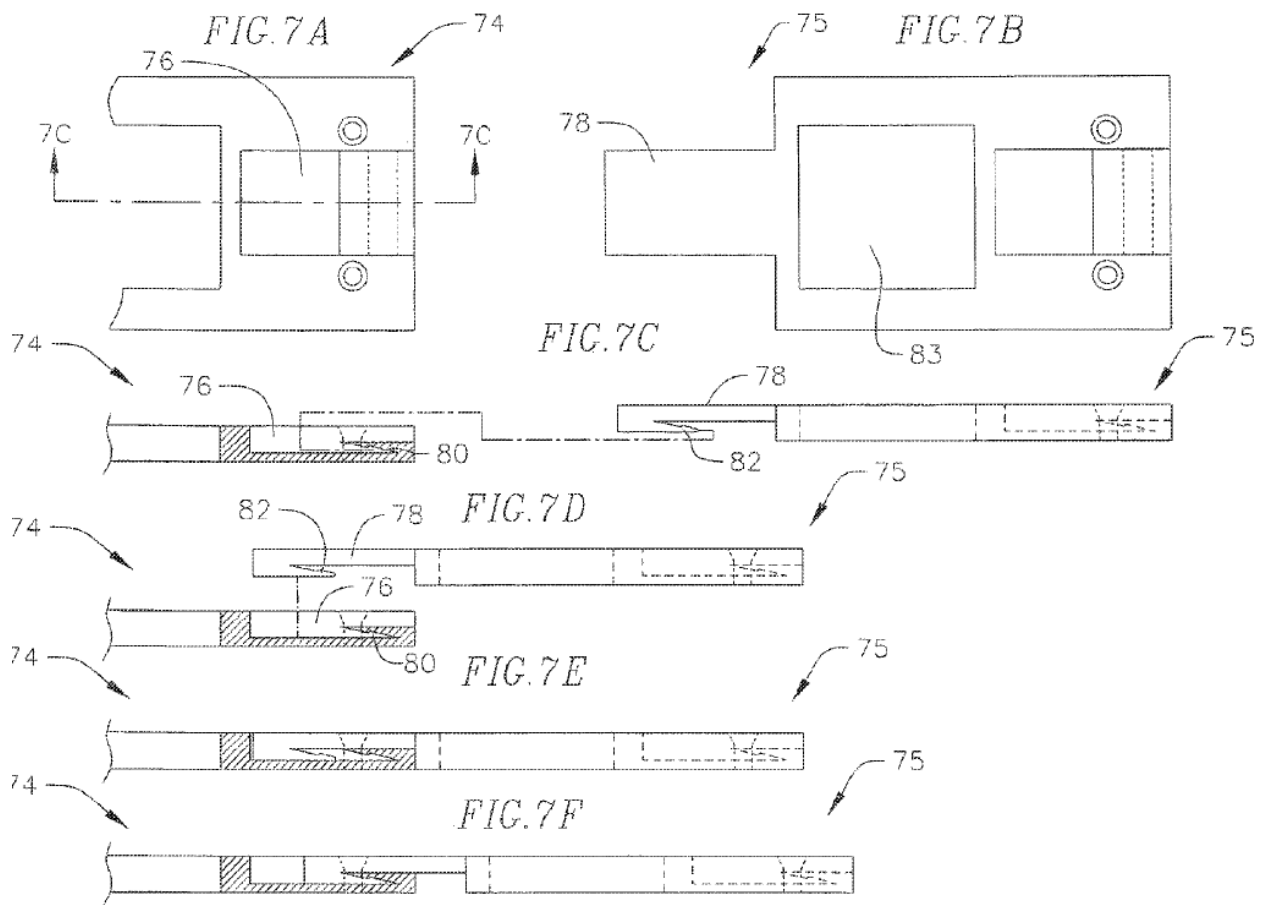
a) *Location in Claims*

‘895 Patent: Claims 5, 20

b) *Stern’s Opening Position*

“a protruding part”

The term “latch” is not used in the specification of the patents-in-suit. The claims describe a “cooperatively interlocking latch” formed on a portion of the armature. From this context, and the figures, such as Figs. 7C-7F of the ‘895 Patent, the latch is a part protruding from the arm that connects with the mating part of the groove to engage or fasten the plates together.



‘895 Patent (D.I. 39, Ex. A) at Figs. 7A-7F. The “latch” is “cooperatively interlocking” meaning that it connects to another part. That part is a channel or groove (depicted as element 76 in the figures above). The “latch” is therefore a protruding part of the arm. *See id.* This is consistent with the dictionary definition of latch, which defines it as “any of various devices in which mating mechanical parts engage to fasten but usually not to lock something.” *See* “latch,” Merriam-Webster.com. Accessed April 7, 2017. <http://www.merriam-webster.com/dictionary/latch>. Stern’s proposed construction of “latch” is consistent with both intrinsic and extrinsic evidence, and thus “latch” should be construed to mean “a protruding part.”

Stern's proposed constructions follow the teachings of the patents-in-suit, including the specification, which is the single best guide to determining the meaning of the claims. Stern's proposed constructions are consistent with the intrinsic evidence, and where applicable the extrinsic evidence, and will properly aid the jury in determining the meaning of the claims. For these reasons, and those stated more fully above, Stern's proposed constructions should be adopted.

c) *Globus' Answering Position*

Plain and ordinary meaning.

Plaintiff admits in its Opening Position that the term latch is not used, described or identified in the '895 Patent specification. Plaintiff's attempt to give latch a meaning that is not its plain and ordinary meaning, but rather is derived from whole cloth is unsupported. Plaintiff's statement in his Opening Position, Section VI.9.b), p. 55, that tethers his construction to "...the dictionary definition of latch, which defines it as 'any of various devices in which mating mechanical parts engage to fasten but usually no lock something'" is directly counter to the asserted claims and the '895 Patent specification. As succinctly noted in Defendant's position on "interlocking portion," "cooperative interlocking portion" and the evidence cited in support, the claims call for "the original and the revision plates of the current invention are constructed as an integrated plate system such that the interlocking portion of the revision plate cooperates with the base interlocking portion of the original plate. These interlocking portions have coordinating surfaces that lock the two plates together and provide torsional stability to and between the plates in at least one dimension that is independent of the connecting screws." D.I. 39, Exhibit A, '895 Patent, Col. 5, lines 30-37. "A protruding part" does not comport with a "latch" or the requirements of "locking."

“Latch” takes its plain and ordinary meaning.

d) Stern’s Reply Position

This is another term for which Defendant requested construction, but now claims that construction is not necessary, and instead the jury should be allowed to impart whatever meaning they like. As noted previously, delegating such legal determination to the jury is improper. Defendant offers no construction, and no insight into what it believes is the plain and ordinary meaning.

In contrast, Stern offers a construction that is not only consistent with the patent, but also consistent with the dictionary definition, meaning to the extent one exists, Stern’s construction is likely the closest thing to a “plain and ordinary” meaning.

While arguing for a plain and ordinary meaning, Defendant argues that the dictionary definition is not correct, calling into question what meaning jurors would ascribe to this term. The cited figures of the patent disclose a part protruding from the arm that connects with a mating part in a groove. The dictionary definition describes a latch quite broadly: “any of various devices in which mating mechanical parts engage to fasten but usually not to lock something.” The dictionary is using the traditional connotation imparted to lock, as restricting all movement, distinguishing “lock” from “fasten.” As both parties have pointed out, “lock” as used in the patent does not mean to restrict all movement, but instead to restrict movement in one direction, or “to provide torsional stability in at least one direction.” In view of the usage in the patent, including the claims and the figures, as well as the corroborating dictionary definition, latch is properly construed as “a protruding part.”

e) Globus’ Sur-Reply Position

Plain and ordinary meaning.

The core issue with latch is that as Plaintiff admits, it is nowhere to be found in the specification. In common use, a latch is not as Plaintiff suggests. Rather, a latch is understood as noted in The American Heritage Dictionary of the English Language, a preferred source of extrinsic evidence, as follows:

1. A fastening, as for a door or gate, typically consisting of a bar that fits into a notch or slot and is lifted from either side by a lever or string. **2.** A spring lock, as for a door, that is opened from the outside by a key. *v.* **latched, latch·ing, latch·es – tr. To close or lock with or as if with a latch.**

Joint Appendix, Exhibit P, The American Heritage Dictionary of the English Language, Fourth Edition, (emphasis added).

In retrospect, although the plain and ordinary meaning holds, considering the issue presented in claim construction and in view of the use of latch in the asserted claims as a whole, if a construction is necessary consideration should be given to the extrinsic evidence noted above.

Dated: June 23, 2017

Respectfully submitted,

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